medical claims records for continuously enrolled adult (≥18 years) first-time statin users. Patients were followed for one year. Liver enzyme and CK tests were identified using CPT-4 procedure codes. Descriptive statistics were used to characterize the population and estimate unadjusted associations between laboratory monitoring and patient characteristics. Multivariable logistic regression was used to estimate the odds of monitoring, controlling for age, gender, number of prescription drugs during statin use, diabetes, statin intensity, prescribing physician specialty, geographic region and health plan type. **RESULTS:** Between July 1, 1997 and March 31, 2007, there were 66,228 new statin users in the study population. 14% of new users were given a liver enzyme test at baseline and 25% received follow-up tests. 3% of new users were given baseline CK tests. Odds of compliant baseline and follow-up liver enzyme testing were higher for those with previous liver disease (OR = 3.0, P < 0.0001) and diabetes (OR = 1.2, P < 0.0001). Cardiologists were less likely to order liver tests than family or general practitioners (OR = 0.68, P < 0.0001). It was estimated that about 19,000 patients were indicated for a baseline CK test, based on risk factors, but only 2.6% of those patients received one. The odds of receiving compliant baseline CK tests increased for patients receiving high potency statins (OR = 1.7, P < 0.01). Cardiologists were more likely to order CK tests than family or general practitioners (OR = 1.8, P < 0.001). **CONCLUSIONS:** While rates of laboratory testing were low, adjusted odds suggest that patients at higher risk for adverse outcomes are more likely to receive compliant liver enzyme and CK monitoring.

PCV42

INPATIENT MORTALITY AND HOSPITALIZATION COSTS IN ATRIAL FIBRILLATION PATIENTS

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OBJECTIVES: Although atrial fibrillation/flutter (AF) is a risk factor for cardiovascular (CV) disease, its morbidity/mortality burden is uncertain. This retrospective cohort study examined CV hospitalization/mortality rates and associated costs among AF patients in the real-world setting. **METHODS:** The US MarketScan® database was used to identify adults with AF (≥1 AF hospital discharge or ≥2 non-diagnostic outpatient AF claims) and ≥18 months' continuous enrollment data [≥12 months and ≥6 months' immediately before and after the first qualifying (index) AF diagnosis] between January 2003 and September 2007. AF was classified as newly-diagnosed (ND) or pre-existing (PRE) based on AF diagnoses in the first 12 months. CV hospitalization and mortality were assessed post-index diagnosis during a mean follow-up period of 20 months.**RESULTS:** Of 184,155 AF patients identified (mean 73 years, 55% men), 119,486 had PRE and 64,669 had ND disease; common comorbidities included hypertension (60%), heart failure (31%), and diabetes (23%). During post-index follow-up, 80,523 PRE patients (67%) *vs.* 51,240 ND patients (79%) were hospitalized. Admissions for CV causes were similarly frequent in patients with PRE and ND disease (mean 0.30 *vs.* 0.33 events/patient, respectively) and incurred similar costs per event for the two groups (mean US$11,898 *vs.* $12,257, respectively). Causes of CV admission (by DRG) in the overall cohort included cardiac arrhythmia (23%), myocardial infarction (3.8%), syncope (3.2%) and 'other/unspecified' (66%). Admissions with an AF diagnosis were more frequent among patients with ND than PRE disease (mean 0.99 *vs* 0.61 events/patient), but hospital costs for the two groups were similar (mean US$12,059 *vs.* $11,984, respectively). In total, 2990 (2.5%) PRE patients and 1409 (2.2%) ND patients died in hospital, with most deaths occurring during admission with an AF diagnosis (58% in both groups). **CONCLUSIONS:** AF is accompanied by a high level of CV hospitalization with associated cost burden and mortality.

CARDIOVASCULAR DISORDERS – Cost Studies

PCV43

CLINICAL AND ECONOMIC IMPACT OF BIVALIRUDIN ON BLEEDING EVENTS IN HIGH RISK UNSTABLE ANGINA (UA)/NON-ST-ELEVATION MYOCARDIAL INFARCTION (NSTEMI) PATIENTS UNDERGOING PERCUTANEOUS CORONARY INTERVENTION (PCI) IN FRANCE

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OBJECTIVES: Approximately 140,000 percutaneous coronary interventions (PCIs) will be performed in France in 2009/2010. PCI complications often increase resource utilization. New antithrombotic therapies have the potential to improve outcomes and decrease costs. The ACUITY trial demonstrated a decreased mortality and a statistically significant reduction in bleeding events with bivalirudin as compared to a heparin-plus-GPI (HEP+GPI) regimen. This analysis evaluated the economic impact of this improvement in the French hospital setting with a focus on reduced access site- and non-access site-related bleeding events. **METHODS:** A budget-impact model was developed to evaluate the impact of bivalirudin in high-risk (per ESC definition) UA/NSTEMI patients undergoing PCI in a French hospital. Clinical data for the model were derived from the ACUITY trial and included 30-day event rates for major complications (total and non-access site bleeding, Q-wave myocardial infarction, repeat PCI and coronary artery bypass graft). Economic data were derived from French medical literature, including clinical event costs, ward costs (both regular and ICU/CCU) and pharmaceutical costs. **RESULTS:** In 100 PCI patients, bivalirudin use would result in 4 fewer protocol-defined major bleeding events (3.8%) and 12 fewer minor bleeding events (12.2%). Considering non-access site bleeding events only (all bleeds excluding retroperitoneal and access site bleeds), bivalirudin use would reduce major and minor bleeding events by 0.7% and 4.7%, respectively. Including all bleeding events, the total hospital budget impact of treating 100 high risk UA/NSTEMI patients using a HEP+GPI-based strategy is €626,903. Introducing a bivalirudin-based strategy could save €32,520 (5%). The reduction in non-access site bleeding events alone could result in savings of €18,028 (3%) per 100 patients. **CONCLUSIONS:** A bivalirudin-based strategy for anticoagulant use in high risk UA/NSTEMI patients undergoing PCI is associated with favorable clinical and economic outcomes when compared with HEP+GPI in a French hospital setting.

PCV44

BUDGET IMPACT OF BIVALIRUDIN IN STEMI PATIENTS UNDERGOING PRIMARY PERCUTANEOUS CORONARY INTERVENTION (PPCI) IN ITALIAN HOSPITALS

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OBJECTIVES: New antithrombotic therapies have the potential to improve clinical outcomes and decrease costs. The HORIZONS-AMI study of bivalirudin demonstrated significantly reduced clinical event rates (mortality and bleeding) compared to a heparin and glycoprotein IIa/IIIb inhibitor (HEP + GPI) regimen. Approximately 24,000 PPCIs were performed in Italy in 2008, based on statistics published by GISE. The potential clinical and economic value of implementing a bivalirudin-based strategy for STEMI patients receiving PPCI is compared to current HEP + GPI-based practice, from a typical Italian hospital perspective. **METHODS:** A budget impact model was developed to compare treatment of STEMI patients undergoing PPCI with either bivalirudin or HEP + GPI. Clinical data for the model was derived from the HORIZONS-AMI trial, and included 30-day event rates for major complications (protocol bleeding, Q-wave myocardial infarction, repeat PCI and coronary artery bypass graft procedures). Italian cost and clinical practice data were derived from published sources. **RESULTS:** Overall average procedure costs per HEP + GPI-treated patient were €7121. Treating patients with bivalirudin (incorporating 7.2% provisional GPI use per HORIZONS-AMI) saved €529 per patient. In extrapolating these benefits to a typical Italian hospital conducting 200 PPCI procedures per year: 2 deaths (1%); 8 major bleeding events (3.7%); and 14 minor bleeding events (6.8%) could be averted if treated with bivalirudin. In addition, introducing a bivalirudin-based strategy to treat a typical cohort of 200 STEMI patients would save the hospital budget €105,807 (7%) per year. Extrapolating these savings to the total number of PPCI procedures performed in Italy in 2008 would result in savings of €1,270,000 in hospital expenditures nationally. **CONCLUSIONS:** Using a bivalirudin-based strategy in STEMI patients undergoing PPCI is associated with favorable clinical and economic outcomes when compared with HEP + GPI in an Italian hospital setting.

PCV45

BUDGET IMPACT OF BIVALIRUDIN IN STEMI PATIENTS UNDERGOING PRIMARY PERCUTANEOUS CORONARY INTERVENTION (PPCI) IN GERMAN HOSPITALS

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OBJECTIVES: Primary percutaneous coronary intervention (PPCI) has become the preferred treatment option for acute ST-segment elevation myocardial infarction (STEMI). In 2006, nearly 38,000 PPCI procedures were performed in Germany. New antithrombotic therapies have the potential to improve clinical outcomes and decrease costs. The HORIZONS-AMI study of bivalirudin demonstrated reduced clinical event rates (mortality and bleeding) compared to a heparin and GPI (HEP + GPI) regimen. The potential economic value of implementing bivalirudin in the PPCI setting is evaluated in this analysis from a German hospital perspective. **METHODS:** A budget impact model was developed to compare treatment of STEMI patients undergoing PPCI with either bivalirudin or HEP + GPI. Clinical data for the model were derived from the HORIZONS trial database, and included 30-day event rates for major complications (bleeding as defined by trial protocol, Q-wave myocardial infarction, and repeat PCI and coronary artery bypass graft procedures) and patient death. German cost and clinical practice data were derived from published sources, the German subset of the HORIZONS trial (n = 786) and the ADONIS registry. **RESULTS:** Overall average procedure cost per bivalirudin-treated patient (incorporating 7.2% provisional GPI use as per HORIZONS) was €8165, compared with €8,84 per HEP + GPI-treated patient. In extrapolating these benefits to a typical German hospital of 200 PPCI patients per year, 2 deaths (1%), 8 major bleeding events (3.7%), and 14 minor bleeding events (6.8%) in patients would be averted if treated with bivalirudin. The total hospital budget impact of treating 200 PPCI patients using a HEP + GPI based strategy is €1,770,814. Introducing a bivalirudin-based strategy could save €137,817 (8%) per year. **CONCLUSIONS:** Using a bivalirudin-based strategy in STEMI patients undergoing PPCI is associated with favorable clinical and economic outcomes when compared with HEP + GPI in a German hospital setting.